

Books & electronic media

SARS: how a global epidemic was stopped

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In 2003, WHO responded to an outbreak of new infectious disease that caused tremendous social, political and economic disruptions in many countries across the world: severe acute respiratory syndrome (SARS). The international health organization played a key leadership role in combating the spread of this disease and forged an exceptional global response to this first global outbreak of the century. Indeed, in this book published by the WHO Regional Office for the Western Pacific (WPRO), Dr Shigeru Omi, Regional Director, has aptly reminded us that “SARS shook the world.”

Most of the twenty-seven chapters are written by the very public health experts and scientists who battled with SARS during the 2003 outbreak. It is divided into five parts (part I: Overall perspective; part II: Country and area perspectives; part III: Outbreaks; part IV: The science of SARS; and part V: The way forward) and has five appendices. The book is richly filled with facts and exclusive inside accounts of what really occurred in those fateful months. It is illustrated with numerous photographs and charts, which manage to convey the information much better than words could. The book's style is engaging, revealing how WHO coordinated the unprecedented global response and how the affected countries and areas managed the outbreaks – from initial denial, to mass mobilization, to controlling the devastating, rapidly spreading disease. More importantly, the book offers insights into the lessons learned from this major public health crisis and provides key information that should be useful for dealing with emerging infectious diseases in the future.

And what did we learn from the SARS outbreak? In the final chapter,

Brian Doberstyn, who in 2003 was the director of the Division for Combating Communicable Disease in WPRO, has penned 13 very important and instructive lessons that were learned. He considers these to be essential ingredients for good, efficient, and effective control of disease outbreaks. I would like to highlight three of these lessons below, since they may be especially relevant also for the current situation with respect to global avian influenza A (H5N1).

First: “transparency is the best policy”. Although nothing was known about the SARS coronavirus at the time when the disease first struck, we soon realized that, as Doberstyn points out, “some of the affected countries did not acknowledge openly and squarely the presence of SARS, downplayed its extent, and attempted to prove that it was something else.” Perhaps, if there had been prompt and accurate reporting of the full facts so that others could have been forewarned and taken preventive measures, history may have taken a different course. Infectious diseases such as SARS do not respect international borders. In one of the chapters in part II of the book, Mangai Balasegaram & Alan Schnur caution that “one nation's weak response could endanger the world's public health security.”

Second: “twenty-first century science played a relatively small role in controlling SARS; nineteenth-century techniques continued to prove their value”. We can not deny the general truth that we still continue to battle twenty-first century scourges with a nineteenth century toolbox supplemented by a few modern scientific advances. While the identification of the coronavirus may not have contributed substantially to control efforts, what was gratifying was that during the SARS outbreak in 2003 there was unprecedented collaboration among scientists and laboratories around the world to work together to identify the causative agent, map its genome and develop reliable diagnostic tests. There was openness and willingness to share critical scientific information promptly. As a result, the virus responsible was identified and its

genome mapped within weeks of the outbreak. The scientific world was shown at its best. It should continue in this vein, with greater and closer cooperation in the face of threats from new and emerging microbes.

Third: “animal husbandry and marketing practices seriously affect human health”. Since its discovery in 2003, the SARS coronavirus has been thought to have originated in animals. One of the chapters of the book attempts to elucidate the evidence for this. In particular, it reports that the palm civet in southern China may have played a crucial role in this respect and that the close relationship between animals and humans seems to have been a likely precondition for the virus to jump the species barrier. Avian influenza is the single biggest public health threat the world faces right now. Fortunately, for the time being, human cases of avian influenza have arisen from direct infection from birds to humans, with only rare instances of probable human-to-human transmission. The SARS episode has underscored the importance of changing animal husbandry practices or “more viruses are likely to emerge from the animal world”. Old and unhygienic veterinary practices must be discarded or the public health risk from zoonotic diseases will always be with us.

The world lost Dr Carlo Urbani to SARS, as he fought to protect others from the infection in Viet Nam. As we remember and salute all those who tackled SARS, despite the dangers involved, we need to recall that nature has its way of reminding us how unpredictable and devastating it can be. Doberstyn concludes with the remark that “it would be tragic if we did not learn from the experience of 2003 and make the most of it”. Indeed, SARS has shown us that if we work together and better prepare ourselves, we can confront and conquer new emerging and re-emerging infectious disease threats with calm and confidence. No man is an island and no country can fight a global public health threat alone. ■

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